



#10/B

SEQUENCE LISTING

<110> Stewart, A. F.
Zhang, Y.
Hallet, B.

<120> A New Tyrosine Recombinase for Genetic Engineering

<130> 9882-012-999

<140> 09/895,435

<141> 2001-06-30

<160> 10

<170> PatentIn version 3.0

<210> 1

<211> 244

<212> DNA

<213> Bacillus thuringiensis

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caatattaat tgtgttgtat taggtgttat aataaatata aatctagggg tttaacgcaa 180
cacaatttat cgataaataa atacttttag acgcaacaca atttatagac gcggaggaaa 240
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<212> DNA

<213> Bacillus thuringiensis

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<213> Bacillus thuringiensis

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cacaatatta attgtgttgt attaggtgtt ataataaata taaatctagg ggtttaacgc 180
aacacaattt atcgataaat aaatactttt agacgcaaca caatttatag acgcggaggga 240
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acc gag aac act gtt cag gga tac aca tca ggt att aga cag tac ata      96
Thr Glu Asn Thr Val Gln Gly Tyr Thr Ser Gly Ile Arg Gln Tyr Ile
20          25          30
aaa tgg ttt gaa ggt tcc tat gac aga aaa ttg aca aaa ttg tac cga      144
Lys Trp Phe Glu Gly Ser Tyr Asp Arg Lys Leu Thr Lys Leu Tyr Arg
35          40          45
caa aat atc tta gag tac att agt tat tta aag aat gtc aaa atg ttg      192
Gln Asn Ile Leu Glu Tyr Ile Ser Tyr Leu Lys Asn Val Lys Met Leu
50          55          60
aac gcc aag tcc att aac cac aag att agt agc ctt gct aaa ttt aat      240
Asn Ala Lys Ser Ile Asn His Lys Ile Ser Ser Leu Ala Lys Phe Asn
65          70          75          80
gaa ttt cta ata cag aaa gga agt caa caa gat caa gta att tta tta      288
Glu Phe Leu Ile Gln Lys Gly Ser Gln Gln Asp Gln Val Ile Leu Leu
85          90          95
gat gta aaa aag ttt tta caa agt gtg tta gag gat aat aac aaa cgt      336
Asp Val Lys Lys Phe Leu Gln Ser Val Leu Glu Asp Asn Asn Lys Arg
100          105          110
aat tat gca att gcc act ctc cta gca tat aca gga gta cgt att tca      384
Asn Tyr Ala Ile Ala Thr Leu Ala Tyr Thr Gly Val Arg Ile Ser
115          120          125
gag gca tta tct atc aaa atg aat gac ttc aat tta cag act ggg gaa      432
Glu Ala Leu Ser Ile Lys Met Asn Asp Phe Asn Leu Gln Thr Gly Glu
130          135          140
tgt att att cga agt gga aaa gga ggt aaa caa cga att gta tta cta      480
Cys Ile Ile Arg Ser Gly Lys Gly Gly Lys Gln Arg Ile Val Leu Leu
145          150          155          160
aat agt aag gta ctt agt gct atc aaa gat tat ctc atc gat cga aaa      528
Asn Ser Lys Val Leu Ser Ala Ile Lys Asp Tyr Leu Ile Asp Arg Lys
165          170          175
aca tac agt aca gca cat gaa tct ccg tat ctt ttt att agt aaa aag      576
Thr Tyr Ser Thr Ala His Glu Ser Pro Tyr Leu Phe Ile Ser Lys Lys
180          185          190
cga gaa aag ctc gac cgt acg gtc gtc aat cgt atc ttt aaa tca tac      624
Arg Glu Lys Leu Asp Arg Thr Val Val Asn Arg Ile Phe Lys Ser Tyr
195          200          205
agg aat gtt att act cca cac caa tta cga cac ttc ttc tgt acg aat      672
Arg Asn Val Ile Thr Pro His Gln Leu Arg His Phe Phe Cys Thr Asn
210          215          220
gca att caa aaa gga ttt agc att cat gaa gtt gca aat caa gct ggg      720
Ala Ile Gln Lys Gly Phe Ser Ile His Glu Val Ala Asn Gln Ala Gly
225          230          235          240
cac tct aac atc cat acg aca cta ctt tac aca aat cca aac caa ctg      768
His Ser Asn Ile His Thr Thr Leu Leu Tyr Thr Asn Pro Asn Gln Leu
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 35 40 45
 Gln Asn Ile Leu Glu Tyr Ile Ser Tyr Leu Lys Asn Val Lys Met Leu
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 Asn Ala Lys Ser Ile Asn His Lys Ile Ser Ser Leu Ala Lys Phe Asn
 65 70 75 80
 Glu Phe Leu Ile Gln Lys Gly Ser Gln Gln Asp Gln Val Ile Leu Leu
 85 90 95
 Asp Val Lys Lys Phe Leu Gln Ser Val Leu Glu Asp Asn Asn Lys Arg
 100 105 110
 Asn Tyr Ala Ile Ala Thr Leu Leu Ala Tyr Thr Gly Val Arg Ile Ser
 115 120 125
 Glu Ala Leu Ser Ile Lys Met Asn Asp Phe Asn Leu Gln Thr Gly Glu
 130 135 140
 Cys Ile Ile Arg Ser Gly Lys Gly Gly Lys Gln Arg Ile Val Leu Leu
 145 150 155 160
 Asn Ser Lys Val Leu Ser Ala Ile Lys Asp Tyr Leu Ile Asp Arg Lys
 165 170 175
 Thr Tyr Ser Thr Ala His Glu Ser Pro Tyr Leu Phe Ile Ser Lys Lys
 180 185 190
 Arg Glu Lys Leu Asp Arg Thr Val Val Asn Arg Ile Phe Lys Ser Tyr
 195 200 205
 Arg Asn Val Ile Thr Pro His Gln Leu Arg His Phe Phe Cys Thr Asn
 210 215 220
 Ala Ile Gln Lys Gly Phe Ser Ile His Glu Val Ala Asn Gln Ala Gly
 225 230 235 240
 His Ser Asn Ile His Thr Thr Leu Leu Tyr Thr Asn Pro Asn Gln Leu
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 <213> Bacillus thuringiensis

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 <223> n = a, t, g, or c

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 tttta 124

